

## ABSTRACT

Modified and stabilized propeptides of Growth Differentiation Factor proteins, such as GDF-8 and Bone Morphogenetic Protein-11, are disclosed. Also disclosed are methods for making and using the modified propeptides to prevent or treat human or animal disorders in which an increase in muscle tissue would be therapeutically beneficial. Such disorders include muscle or neuromuscular disorders (such as amyotrophic lateral sclerosis, muscular dystrophy, muscle atrophy, congestive obstructive pulmonary disease, muscle wasting syndrome, sarcopenia, or cachexia), metabolic diseases or disorders (such as such as type 2 diabetes, noninsulin-dependent diabetes mellitus, hyperglycemia, or obesity), adipose tissue disorders (such as obesity), and bone degenerative diseases (such as osteoporosis).